t12_hessenbe (TMHd-dJTDd9YhtUghCgHgTQkKqWCAiXpuFoA)

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Let $v2\_struct\_0 : \iota \Rightarrow o$ be given. Let $v2\_collsp : \iota \Rightarrow o$ be given. Let $v3\_collsp : \iota \Rightarrow o$ be given. Let $v4\_collsp : \iota \Rightarrow o$ be given. Let $v2\_anproj\_2 : \iota \Rightarrow o$ be given. Let $v3\_anproj\_2 : \iota \Rightarrow o$ be given. Let $l1\_collsp : \iota \Rightarrow o$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $u1\_struct\_0 : \iota \Rightarrow \iota$ be given. Let $r1\_collsp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_collsp\ X0) \wedge ((v3\_collsp\ X0) \wedge ((v4\_collsp\ X0) \wedge ((v2\_anproj\_2\ X0) \wedge ((v3\_anproj\_2\ X0) \wedge (l1\_collsp\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (((r1\_collsp\ X0\ X1\ X2\ X3) \wedge (r1\_collsp\ X0\ X1\ X2\ X4)) \Rightarrow ((X1 = X2) \vee (r1\_collsp\ X0\ X1\ X3\ X4)))))))) \tag{1}$$

Assume the following.

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_collsp\ X0) \wedge ((v3\_collsp\ X0) \wedge ((v4\_collsp\ X0) \wedge ((v2\_anproj\_2\ X0) \wedge ((v3\_anproj\_2\ X0) \wedge (l1\_collsp\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow ((r1\_collsp\ X0\ X1\ X2\ X3) \Rightarrow ((r1\_collsp\ X0\ X2\ X3\ X1) \wedge ((r1\_collsp\ X0\ X3\ X1\ X2) \wedge ((r1\_collsp\ X0\ X2\ X1\ X3) \wedge ((r1\_collsp\ X0\ X1\ X3\ X2) \wedge (r1\_collsp\ X0\ X3\ X2\ X1)))))))) \tag{2}$$

Theorem 1

$$\forall X0.((\neg v2\_struct\_0\ X0) \wedge ((v2\_collsp\ X0) \wedge ((v3\_collsp\ X0) \wedge ((v4\_collsp\ X0) \wedge ((v2\_anproj\_2\ X0) \wedge ((v3\_anproj\_2\ X0) \wedge (l1\_collsp\ X0)))))) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X2.(m1\_subset\_1\ X2\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X3.(m1\_subset\_1\ X3\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X4.(m1\_subset\_1\ X4\ (u1\_struct\_0\ X0)) \Rightarrow (\forall X5.(m1\_subset\_1\ X5\ (u1\_struct\_0\ X0)) \Rightarrow (\neg(\neg r1\_collsp\ X0\ X1\ X2\ X3) \wedge ((r1\_collsp\ X0\ X1\ X2\ X4) \wedge ((r1\_collsp\ X0\ X3\ X5\ X4) \wedge ((X4 \neq X5) \wedge ((X2 \neq X4) \wedge (r1\_collsp\ X0\ X4\ X2\ X5)))))))))))$$